

IN THE CLAIMS

1. (previously presented) A ventilated seat for a vehicle, comprising:
a vehicle seat having a ventilated component selected from a seat cushion component and a seat backrest component, at least one of which provides a seat cushion and an air permeable trim surface at occupant contact areas of the seat;
an insert that is open at its sides and located beneath the trim surface of the ventilated component, the insert including:
 - i) a first layer having a heater integrated therein;
 - ii) a second layer formed of spacer material, the second layer defining an open space, wherein the spacer material provides opposing honeycomb structures that are formed of a finer filament polymeric strand material than the rest of the spacer material;
a fluid mover in fluid communication with the insert for moving air through the open space and at least partially past an occupant in the seat; and
a tubular structure for providing the fluid communication between the insert and the fluid mover.
- Claim 2: (cancelled)
- Claim 3: (cancelled)
4. (previously presented) The ventilated seat of claim 1 wherein the insert further comprises an adhesive layer for adhering the first layer to the second layer.
5. (previously presented) A ventilated seat for a vehicle, comprising:
a vehicle seat having a ventilated component selected from a seat cushion component and a seat backrest component, at least one of which provides a seat cushion and an air permeable trim surface at occupant contact areas of the seat;

an insert that is open at its sides and located beneath the trim surface of the ventilated component, the insert including:

i) a first layer having a heater integrated therein;

ii) a second layer formed of spacer material, the second layer defining an open space, wherein the spacer material provides opposing honeycomb structures that are formed of a finer filament polymeric strand material than the rest of the spacer material;

a fluid mover in fluid communication with the insert for moving air through the open space and at least partially past an occupant in the seat;

a tubular structure for providing the fluid communication between the insert and the fluid mover, wherein the tubular structure is provided by the a foam cushion and defines a passageway through the cushion; and

a deflector is disposed over the passageway defined by the tubular structure for assisting in directing fluid radially away from the passageway.

6. (previously presented) The ventilated seat of claim 1 wherein the tubular structure is integral with the insert.

7. (previously presented) The ventilated seat of claim 1 wherein the tubular structure is defined by a wall and a portion of the wall nearest a forward edge of the seat cushion component is at an angle between about 20 degrees and about 60 degrees relative to another portion of the wall nearest a rearward edge of the seat cushion component.

Claim 8: (Cancelled)

9. (previously presented) The ventilated seat of claim ~~58~~ wherein a plurality of sub-passageways are formed in the foam cushion and extend radially away from the passageway of the foam cushion.

10. (previously presented) The ventilated seat of claim 1 further comprising a control unit for selectively operating the fluid mover, the heater layer or both.
11. (previously presented) The ventilated seat of claim 10 wherein the control unit is configured to operate the heater layer, the fluid mover or both at two or more different output levels.
12. (previously presented) The ventilated seat of claim 10 wherein the control unit is in signaling communication with a temperature sensor and the control unit is configured to activate the fluid mover if a relatively high temperature is sensed by the sensor and activate the heater if a relatively low temperature is sensed by the sensor.
13. (previously presented) The ventilated seat of claim 1 wherein the fluid mover is configured to pull air through the open space provided by the spacer layer.
14. (previously presented) The ventilated seat of claim 1 wherein the fluid mover is configured to push air through the open space of the spacer material layer.
15. (previously presented) A ventilated seat for a vehicle, comprising:
a vehicle seat having a ventilated component selected from a seat cushion component and a seat backrest component, at least one of which provides a seat cushion and an air-permeable trim surface at occupant contact areas of the seat;
an insert that is open at its sides and located beneath the trim surface of the ventilated component, the insert including:
- i) a first layer having a lay-wire carbon fiber heater integrated therein;
 - ii) a second layer formed of spacer material laminated to the first layer with an adhesive, the spacer layer including a pair of fabric panels interconnected by polymeric strand materials for defining an open space between the fabric panels; and

- iii) a buffer layer incorporated into the insert adjacent the first layer, the buffer layer being breathable for allowing fluid flow therethrough.

a fluid mover in fluid communication with the insert for moving air under positive pressure through the open space and at least partially past an occupant in the seat; and

a tubular structure extending through the seat cushion and defining a passageway for providing the fluid communication between the insert and the fluid mover, the tubular structure including an enlarged portion.

16. (previously presented) The ventilated seat of claim 15 wherein the fabric panels of the spacer layer are opposing honeycomb structures that are formed of a finer filament polymeric strand material than the rest of the spacer material.

17. (previously presented) The ventilated seat of claim 15 wherein the tubular structure is integral with the insert.

18. (previously presented) The ventilated seat of claim 15 wherein the tubular structure is defined by a wall and a portion of the wall nearest a forward edge of the seat cushion component is at an angle between about 20 degrees and about 60 degrees relative to another portion of the wall nearest a rearward edge of the seat cushion component.

19. (previously presented) The ventilated seat of claim 15 wherein a deflector is disposed over the passageway defined by the tubular structure for assisting in directing fluid radially away from the passageway.

20. (previously presented) The ventilated seat of claim 19 wherein a plurality of sub-passageways are formed in the a foam cushion and extend radially away from the passageway of the foam cushion.

21. (previously presented) The ventilated seat of claim 15 further comprising a control unit for selectively operating the fluid mover, the heater layer or both.
22. (previously presented) The ventilated seat of claim 21 wherein the control unit is configured to operate the heater layer, the fluid mover or both at two or more different output levels.
23. (previously presented) The ventilated seat of claim 21 wherein the control unit is in signaling communication with a temperature sensor and the control unit is configured to activate the fluid mover if a relatively high temperature is sensed by the sensor and activate the heater if a relatively low temperature is sensed by the sensor.
24. (previously presented) The ventilated seat of claim 21 wherein the fluid mover is configured to pull air through the open space provided by the spacer layer.
25. (previously presented) The ventilated seat of claim 22 wherein the fluid mover is configured to push air through the open space of the spacer layer.
26. (previously presented) A ventilated seat for a vehicle, comprising:
a vehicle seat having a pair of ventilated components including a seat cushion component and a seat backrest component, both the seat cushion component and the seat backrest component providing a seat cushion and an air-permeable trim surface at occupant contact areas of the seat;
a pair of inserts, one in the seat cushion component and one in the seat backrest component, each insert being open at its sides and located beneath the trim surface of each ventilated component, each insert including:
i) a first layer having a lay-wire carbon fiber heater integrated therein;
ii) a second layer formed of spacer material laminated to the first layer with an adhesive, the spacer layer including a pair of fabric panels

interconnected by polymeric strand materials for defining an open space between the fabric panels; and

- iii) a buffer layer incorporated into the insert adjacent the first layer, the buffer layer being breathable for allowing fluid flow therethrough.

a pair of fluid movers respectively in fluid communication with the pair of inserts for moving air through the open space of each insert and at least partially past an occupant in the seat; and

a pair of tubular structures, each structure respectively extending through each seat cushion of each ventilated component and defining a passageway for providing the fluid communication between the respective inserts and the respective fluid movers, each tubular structure including an enlarged portion.

27. (previously presented) A ventilated seat for a vehicle, comprising:

a multi-layer laminate insert that is open at its sides and located beneath the trim surface of the ventilated component, the insert including:

- i) a first layer having a heater integrated therein, the heater including a plurality of flexible electrical substantially flat heating elements;
- ii) a second layer formed of spacer material, the second layer defining an open space, wherein the spacer material provides opposing honeycomb structures that are formed of a finer filament polymeric strand material than the rest of the spacer material;

a blower in fluid communication with the insert for moving air through the open space and at least partially past an occupant in the seat; and

a duct for providing the fluid communication between the insert and the blower.

28. (previously presented) The ventilated seat of claim 27, further comprising a plurality of sub-passageways.

29. (previously presented) The ventilated seat of claim 28 wherein the duct provides a passageway and the plurality of sub-passageways extend radially away from the passageway.

30. (previously presented) The ventilated seat of claim 27 wherein the plurality of heating elements are wires or carbon fibers laminate to a backing.

31. (previously presented) The ventilated seat of claim 27 wherein the spacer material includes polymeric strand material.

Claim 32 (Cancelled)

33. (previously presented) The ventilated seat of claim 27 wherein the insert further comprises an adhesive layer for adhering the first layer to the second layer.

34. (previously presented) The ventilated seat of claim 27 wherein the duct is provided by a foam cushion and defines a passageway through the cushion.

35. (previously presented) The ventilated seat of claim 27, wherein the duct is defined by a wall and a portion of the wall nearest a forward edge of the seat cushion component is at an angle between about 20 degrees and about 60 degrees relative to another portion of the wall nearest a rearward edge of the seat cushion component.

36. (previously presented) The ventilated seat of claim 34 wherein a deflector is disposed over the passageway defined by the tubular structure for assisting in directing fluid radially away from the passageway.

37. (previously presented) The ventilated seat of claim 36, wherein a plurality of sub-passageways are formed in the foam cushion and extend radially away from the passageway of the foam cushion.

38. (previously presented) The ventilated seat of claim 27 further comprising a control unit for selectively operating the fluid mover, the heater layer.
39. (previously presented) The ventilated seat of claim 38, wherein the control unit is configured to operate the heater layer, the fluid mover or both at two or more different output levels.
40. (previously presented) The ventilated seat of claim 39, wherein the control unit is in signaling communication with a temperature sensor and the control unit is configured to activate the fluid mover if a relatively high temperature is sensed by the sensor and activate the heater if a relatively low temperature is sensed by the sensor.
41. (previously presented) The ventilated seat of claim 37 wherein the fluid mover is configured to pull air through the open space provided by the spacer layer.
42. (previously presented) A ventilated seat as in claim 37 wherein the fluid mover is configured to push air through the open space of the spacer layer.

Claims 43-56: (Canceled)